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ABSTRACT

This survey, which was conducted in 1991, was designed to assess the education information needs of respondents, as well as the extent of their use of (Educational Resources Information Center), ERIC, their evaluation of ERIC services and products, and their suggestions for system improvement and expansion. The 1,184 respondents who completed a 21-question survey included administrators, classroom teachers, policymakers, education researchers, graduate students, and others. Their responses showed a high degree of familiarity with ERIC; librarians were the user group with the highest degree of ERIC recognition; the two most common ways to learn about ERIC were through courses or inservice training and through the library; over half of the respondents had used ERIC Clearinghouses; over a third had written documents in the database; and a large number were unfamiliar with or knew about but did not use the ERIC Document Reproduction Service. Well over half of the respondents who had done ERIC searches rated each type of search service--online, CD-ROM, and printed or microfiche indexes--as "Very Helpful." Both RIE and CIJE received particularly high ratings. Research was the most common purpose for database use, and school administrators were the most diverse in their use. User recommendations for improvement fell into four areas: technology expansion, database improvements, product improvement, and accessibility and training. This report contains an executive summary; background information on the survey; detailed discussions of both the survey findings and their implications; and recommendations for system improvements based on the findings. A copy of the questionnaire and a description of the survey methodology are appended. (BBM)

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REPORT: ERIC USER SURVEY

Office of Educational Research and Improvement
Office of Research
Educational Resources Information Center (ERIC)

By

ACCESS ERIC
Contract Number RI890120
Aspen Systems Corporation
Rockville, Maryland

December 1991

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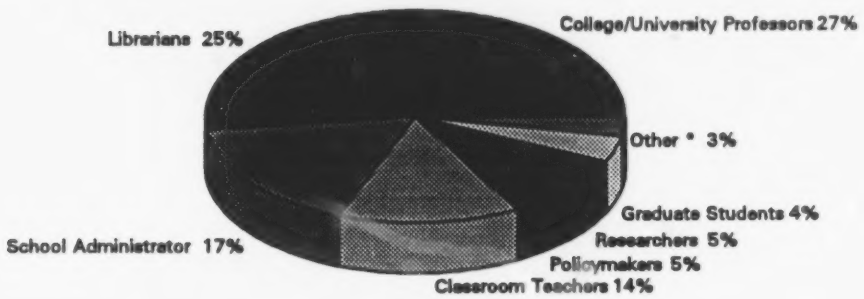
Executive Summary

This report, authorized by the U.S. Department of Education's Office of Educational Research and Improvement, presents findings from a survey on the Educational Resources Information Center (ERIC) conducted between May and September 1991. A total of 1,184 respondents, including college and university professors, librarians, school administrators, classroom teachers, policymakers, education researchers, graduate students, and others, completed a 21-question survey developed by the ERIC Assessment Task Force and approved by the Office of Management and Budget. Figure 1 provides a breakdown of survey respondents by user groups. Survey administration and data coding, compilation, and analysis were conducted by ACCESS ERIC under the direction of Dr. Beverly Swanson.

The survey was designed to assess the education information needs of respondents, as well as the extent of their use of ERIC, their evaluation of ERIC services and products, and their suggestions for system improvement and expansion. As such, it is one tool for system evaluation, improvement, and planning.

FIGURE 1
SURVEY RESPONDENTS BY USER GROUPS



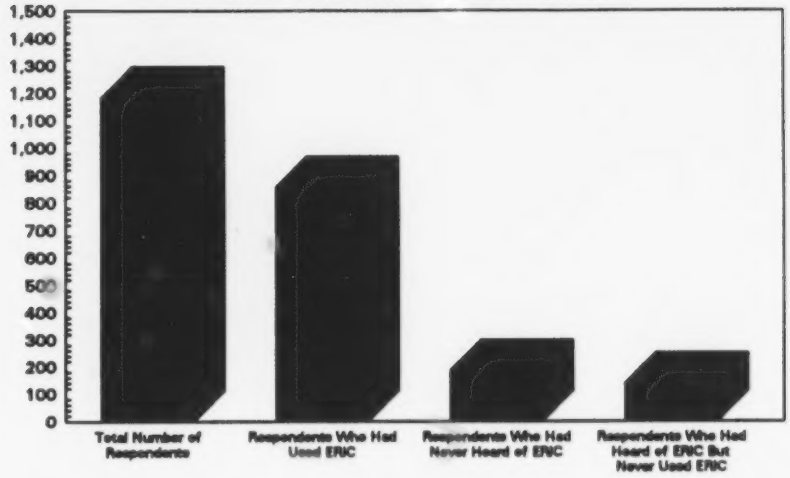
* Includes parents, counselors, journalists, undergraduates, and respondents with unspecified occupations.

Survey Findings

Familiarity With ERIC

Survey respondents showed a high degree of familiarity with ERIC: 72 percent of the 1,184 respondents had used ERIC, 12 percent had heard of ERIC but not used it, and 16 percent had neither used nor heard of ERIC (see Figure 2).

FIGURE 2
RESPONDENTS' FAMILIARITY WITH ERIC



Other key survey findings related to system recognition and use are as follows:

- Librarians were the user group with the highest degree of ERIC recognition—98 percent of them had heard about the system—and teachers, at 48 percent, were the lowest.

- The two most common ways to learn about ERIC were through courses or inservice training (identified by 52 percent of the respondents) and through the library (identified by 26 percent).

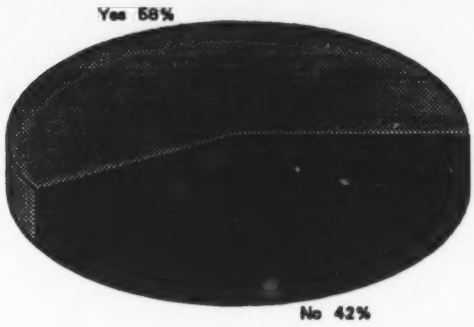
- Among all respondents, *Current Index to Journals in Education* (*CIJE*) was a slightly more familiar resource than *Resources in Education* (*RIE*): 71 percent had used *CIJE* and 65 percent had used *RIE*.

- As Figure 3 shows, 58 percent of the respondents had used ERIC Clearinghouses, including 72 percent of the school administrators, 71 percent of the university professors and education researchers, 41 percent of the teachers, and 38 percent of the librarians.

- Approximately 36 percent of the respondents had written documents that were abstracted in the database, including 59 percent of the university faculty and education researchers surveyed.

- A large number of respondents were unfamiliar with or knew about but did not use the ERIC Document Reproduction Service (EDRS). Of the respondents who answered a question about EDRS, 38 percent had never used it, 40 percent found it "Very Helpful," 20 percent found it "Somewhat Helpful," and 2 percent said it was "Not Helpful."

FIGURE 3
HAVE YOU EVER USED AN ERIC CLEARINGHOUSE?

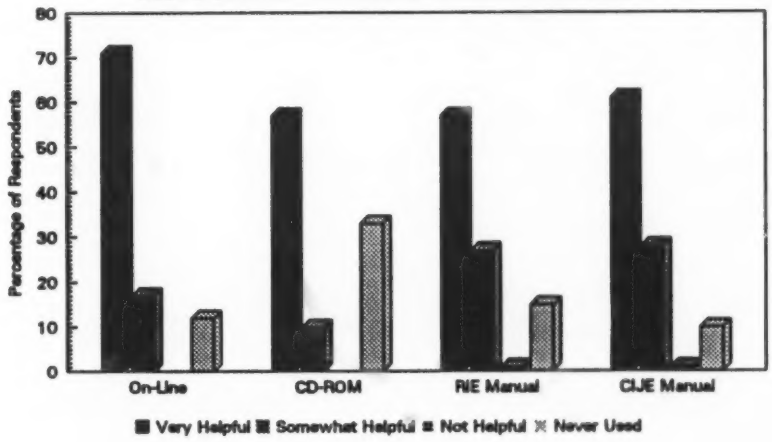


Evaluation of ERIC Services and Products

The survey respondents who had used ERIC in some capacity were asked to evaluate the full range of ERIC services and products, including the database, search services, reference materials, and ERIC Clearinghouses and Support Components. They answered objective questions, marked rating scales, and responded to open-ended questions. Respondents were most familiar with the ERIC database and much less familiar with the ERIC Document Reproduction Service, the ERIC Clearinghouses, and ACCESS ERIC.

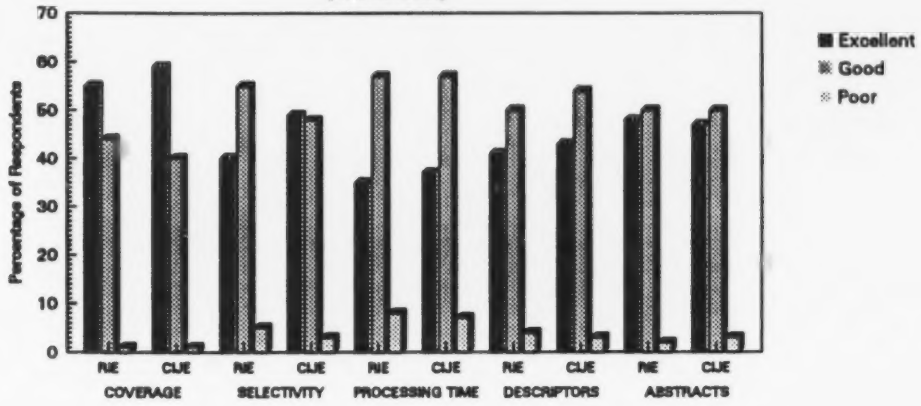
ERIC users may search online, on Compact Disc-Read Only Memory (CD-ROM), or manually through print and microfiche indexes. Survey respondents who had done ERIC searches were highly satisfied with their experiences: well over half of the respondents rated each type of search service "Very Helpful." Figure 4 presents respondents' ratings of search services. Of particular interest is the fact that 33 percent of the survey respondents had never used CD-ROM, as compared with 15 percent who had never used *CIJE*, 12 percent who had never conducted or requested online searching, and 10 percent who had not used *RIE*.

FIGURE 4
RESPONDENTS' RATINGS OF SEARCH SERVICES



Survey respondents familiar with *RIE* and *CIJE* were asked to rate such aspects of the indexes as coverage, selectivity, processing time, descriptors, and abstracts (see Figure 5). The coverage found in both indexes received particularly high ratings: 99 percent of the respondents rated each index's coverage either "Excellent" or "Good." The greatest area of respondent concern was processing time: 8 percent indicated that *RIE's* processing speed was "Poor," as did 7 percent of *CIJE* raters.

FIGURE 5
RESPONDENTS' RATINGS OF PRINTED INDEXES
(RIE & CIJE)



Survey respondents were also asked to indicate what types of information they obtained from ERIC and for what purposes. More than half the respondents indicated that they used ERIC to retrieve journal articles; their other choices, listed in descending order of frequency, were as follows: unpublished documents, conference papers, literature reviews, and curriculum materials. Research was by far the most common purpose for database use among respondents: 73 percent of respondents used ERIC for research, followed by 9 percent using it primarily for administrative decisionmaking, 7 percent using it for curriculum development, and 4 percent using ERIC to identify instructional techniques. Among user groups, school administrators were most diverse in their use of ERIC, with 53 percent identifying research as their primary reason for searching, 26 percent identifying decisionmaking, 16 percent selecting curriculum development, and 4 percent selecting instruction.

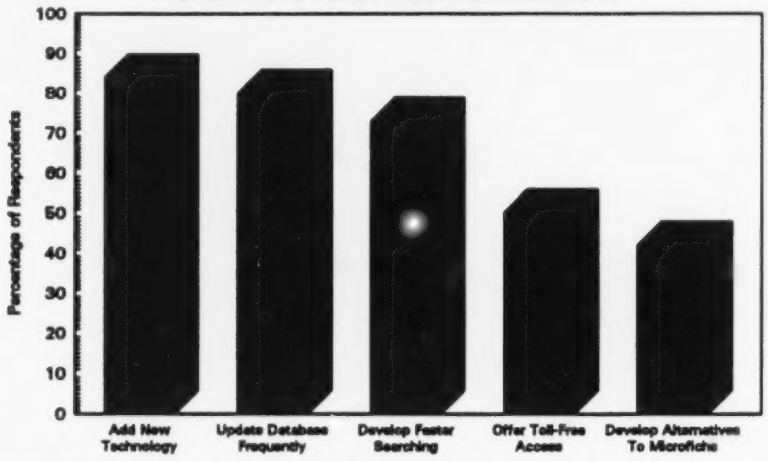
User Recommendations for System Improvements

Survey respondents who used ERIC generally rated it very highly: 96 percent of them indicated that ERIC met their basic education information needs, and 90 percent felt ERIC was accessible when they needed education information. Respondents also suggested improvements in the following areas:

- Technology expansion (including faster searching and alternatives to microfiche).
- Database improvements (including more frequent updates, more comprehensive coverage, full-text retrieval, and greater quality control).
- Product development (including more annotated bibliographies on "hot" topics in education for librarians, professors, and school administrators; ready database searches for professors, researchers, and school administrators; and materials for parents requested by school administrators and teachers).
- Accessibility and training (including financial support for installing equipment, more toll-free phone service, and more and better training materials).

Figure 6 shows the most commonly recommended system improvements.

FIGURE 6
SYSTEM IMPROVEMENT RECOMMENDATIONS



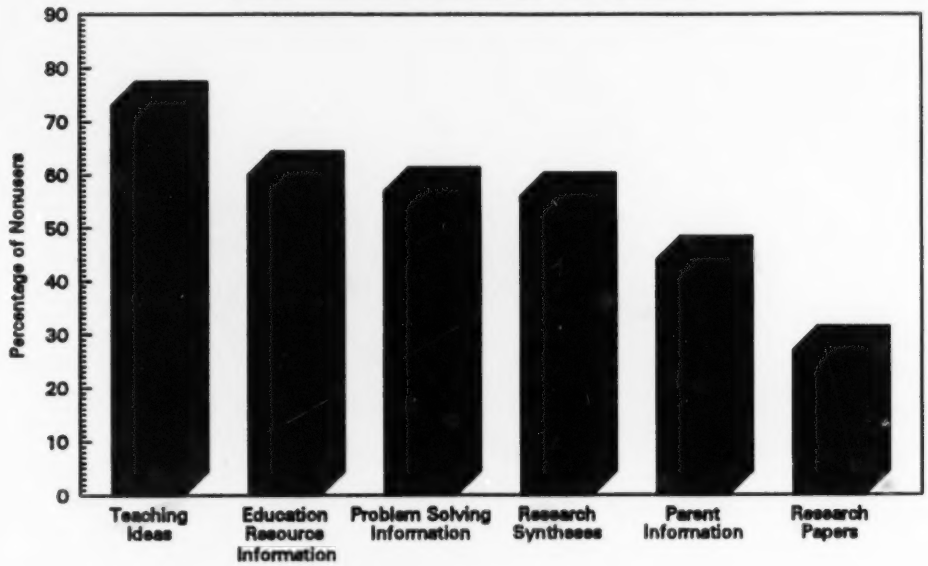
Because the ERIC System has been exploring the issue of greater outreach to teachers and parents, several anecdotal comments from respondents regarding the usefulness of ERIC to this audience and ways to reach teachers and parents are included in the report.

Information Needs of ERIC Users and Nonusers

There was a significant divergence in the stated information needs of ERIC users and ERIC nonusers who responded to the survey: current users indicated that synopses of education research and research projects/papers were their most important information needs, while nonusers, who were mostly teachers, requested practical ideas for teaching and considered research papers their least significant education need (see Figure 7). This divergence will likely require further exploration as ERIC seeks to broaden its user

base. It suggests not only a need for better marketing of existing products and services but a potential shift in system resources in order to disseminate practitioner-oriented information to a new target audience.

FIGURE 7
INFORMATION NEEDS OF NONUSERS



Implications of Survey Data

In the second section of the report, the implications of the survey findings are explored. Findings are linked with recommendations for improvement in four areas.

- Recommendations for database improvements encompass such technical improvements as more frequent updates to the database, faster searching, and full-text availability, as well as the scope of coverage. Tradeoffs between desired improvements and user expectations regarding ease of use and affordability are introduced.

- Recommendations in the area of product development suggest further movement toward "packaging" database-derived information (e.g., bibliographies) with other text (e.g., *ERIC Digests*) as well as publicizing existing products that do this (e.g., the *Teaching Resources in the ERIC Database* or *TRIED* series) and creating new products and training materials for teachers, librarians, and professors.

- Training products are also a component of the marketing/outreach

recommendations. Specifically, librarians need more information about the Clearinghouses and EDRS, teachers need more information about curriculum and instruction materials available from ERIC as well as on how to enter their own materials into the database, and parents, particularly low-income, minority, and limited-English-speaking parents, need to be further consulted regarding their education information needs.

- Finally, recommendations for training suggest that librarians and education professors receive special "training for the trainers," and experienced teachers be invited to learn about ERIC through inservice workshops or continuing education.

Conclusion

The findings from this survey offer a snapshot of ERIC's current strengths and weaknesses from the perspective of a wide range of users. The findings and resultant recommendations may be used as a resource for improving the ERIC System in two ways: through the enhancement of existing services and products and the development of new ones to meet the education information needs of today's and tomorrow's ERIC users.

1. INTRODUCTION

To assess the effectiveness of the Educational Resources Information Center (ERIC) in responding to education information needs and to chart future directions for the ERIC System, the Office of Educational Research and Improvement authorized a user survey which was undertaken between May and September 1991. This survey was conducted by ACCESS ERIC, with oversight from a systemwide ERIC Assessment Task Force.

The 21-question survey was completed by 1,184 respondents, including 321 college and university professors, 295 librarians, 202 school administrators, 163 classroom teachers, 59 policymakers (e.g., school board members), 56 education researchers, 44 graduate students, 15 parents, 6 school counselors, 1 journalist, 1 undergraduate, and 21 individuals who identified themselves as "Other." The survey included objective questions, rating scales, and open-ended questions about respondents' education information needs, ERIC use, and evaluation of ERIC products and services. A copy of the survey instrument is included as Appendix A.

This report presents the key findings of the survey, organized into two sections:

- Survey Findings
- Implications of Survey Data

Statistical data from the surveys are supplemented with comments from respondents where illuminating. Raw data are available for review at ACCESS ERIC, 1600 Research Boulevard, Rockville, Maryland 20850. Appendix B of this report addresses survey methodology.

2. SURVEY FINDINGS

2.1 Respondents' Familiarity with ERIC

Of the 1,184 survey respondents, 72 percent (853) indicated they had used ERIC, 12 percent (142) had heard of ERIC but not used it, and 16 percent (189) indicated they had never heard of ERIC. As expected, certain user groups demonstrated great familiarity with ERIC. Of 295 librarians who responded, 98 percent had heard of ERIC. Ninety percent of 377 researchers and university faculty had heard of the system, as had 89 percent of 202 school administrators. Among policymakers, the figure was 59 percent (35 out of 59), while only 48 percent of the teacher respondents (79 out of 163) had heard of ERIC. Since most librarians, researchers, university faculty, and school administrators have advanced degrees, it may be that they learned of ERIC while doing graduate-level research and coursework. Classroom teachers, on the other hand, commonly take education, subject specialty, and liberal arts courses during their undergraduate training and may not be exposed to ERIC in those less research-oriented classes.

The two most common ways for all user groups to hear about ERIC were through courses or inservices and through the library. A total of 52 percent of the 877 respondents who answered this question identified courses or inservice training as their information source, and 26 percent identified the library. The top ranking of these two sources remained constant among the various user groups. Librarians identified these two sources almost exclusively, while other user groups also identified colleagues, journals and newsletters, and conferences as information sources.

In general, colleagues were identified as the third most common source for information about ERIC, behind formal training or libraries, but still significant. Approximately 17 percent of the 72 elementary and secondary teachers, 16 percent of the 50 education researchers, 11 percent of the 241 college and university faculty, 10 percent of the 151 school administrators, 10 percent of the 39 graduate students, and 10 percent of the 31 policymakers who answered this question identified colleagues as a source of information about ERIC.

Print materials and conferences were also identified as the source of some respondents' knowledge of ERIC. Approximately 10 percent (15) of school administrators learned of ERIC through journals or newsletters, as did 7 percent (2) of the policymakers and 6 percent (4) of the classroom teachers. Conferences were the source of ERIC information for 6 percent (15) of college faculty, 6 percent (4) of the teachers, and 5 percent (8) of school administrators.

A full 82 percent of the 598 respondents who answered a question about how long they had known about ERIC first learned about ERIC seven or more years ago. In two user subgroups—graduate students and classroom teachers—the majority of respondents had first learned about ERIC more recently. Sixty-seven percent of the 24 graduate students who responded to this question first heard about ERIC within the past 6 years, as did 50 percent of the 40 teachers. One possible explanation for this variance is that the librarians, university faculty, and administrators, who have received advanced degrees, are older, as a group, than graduate students and teachers. Alternatively, graduate students' and teachers' more recent knowledge of ERIC may mean that the ERIC System's relatively recent emphasis on outreach to practitioners is paying off.

Eighty-six percent of 997 respondents who had heard about ERIC had also used the system, including 93 percent of the 290 librarians, 92 percent of the 241 university faculty and researchers, and 91 percent of the 43 graduate students who responded to the question. A lower percentage of education practitioners and policymakers indicated ERIC use: 79 percent of 179 school administrators, 71 percent of 79 classroom teachers, and 66 percent of the 35 policymakers who answered had used the system.

Respondents were also asked to specify whether they had ever used various components of the system, including *Resources in Education* (*RIE*), *Current Index to Journals in*

Education (*CIJE*), and the ERIC Clearinghouses. A slightly higher percentage of respondents used *CIJE* than *RIE*—71 percent (510 of 720) as compared to 65 percent (506 of 785).[1] Librarians were the user group with the highest percentage of use of these publications: 81 percent of the librarians (193 out of 238) had used *CIJE*, and 74 percent (187 out of 252) had used *RIE*. They were followed by university faculty and education researchers, 74 percent (206 out of 278) of whom had used *CIJE* and 69 percent (205 out of 296) of whom had used *RIE*. Slightly more than half of the school administrators had used *CIJE* and *RIE*—52 percent (52 out of 100) and 53 percent (64 out of 120), respectively. While 52 percent of classroom teachers (24 out of 46) had used *CIJE*, only 37 percent (18 out of 49) had used *RIE*. Graduate students, too, showed greater familiarity with or preference for *CIJE*: 68 percent (21 out of 31) had used it, while only 47 percent (17 out of 36) had used *RIE*.

Fifty-eight percent (465 out of 808) of the respondents who answered a question on the Clearinghouses indicated they had used them. This is one case in which policymakers, education professors, and practitioners appeared to have more familiarity with an aspect of the ERIC System than librarians. Eighty percent (16 out of 20) of the policymakers, 72 percent (94 out of 130) of the school administrators, and 71 percent (212 out of 297) of university professors and researchers who answered the question had used the ERIC Clearinghouses, while only 41 percent (21 out of 51) of the teachers and 38 percent (98 out of 260) of the librarians who answered had.

Of 761 respondents who answered the question, approximately 36 percent indicated that they had firsthand knowledge of the ERIC System as an author of a document or journal article in the database. Predictably, the group with the highest percentage of ERIC authors among question respondents was university faculty and researchers, at 59 percent (168 out of 285). This group was followed by policymakers at 37 percent (7 out of 19), school administrators at 24 percent (29 out of 120), and librarians at 20 percent (49 out of 244). About 15 percent (7 out of 48) of the classroom teachers who responded to this question were ERIC authors.

In addition to describing usage patterns, respondents were asked to rate their impressions of several aspects of the ERIC System. These results are discussed in greater detail in the following section.

2.2 Evaluation of ERIC Services and Products

Survey respondents who were familiar with ERIC were asked to evaluate the full range of the system's services and products, including the database itself, search services,

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[1]In this discussion, as elsewhere in this report, respondents' answers to two or more survey questions are compared. In some cases, respondents from various user groups answered one question but not the other(s); therefore, the size of the user group samples from which percentages are calculated may vary.

printed reference materials, and the Clearinghouses and Support Components. They answered objective questions, responded to ratings scales, and, in some cases, offered open-ended responses. This section presents both survey data and comments that illustrate major trends.

2.2.1 Search Services

ERIC users search the database online, on Compact Disc-Read Only Memory (CD-ROM), or through print and microfiche indexes. A number of survey questions addressed the usefulness of these three searching modes to both librarians and end users. Respondents' views about the helpfulness of each are narrated in the following section.

Online Service. ERIC online search services appear to meet the needs of ERIC users. Of the 745 respondents who rated the online service, 71 percent felt online searching was "Very Helpful," and 17 percent, "Somewhat Helpful." Twelve percent (89) stated they had "Never Used" ERIC online, and 26 of these were librarians. A librarian noted "a lot of replication of online entries" and suggested that the cost of searching "should be free or dramatically reduced." Another librarian was interested in receiving a manual for doing ERIC online searching more easily.

CD-ROM Service. Respondents who had used ERIC on CD-ROM rated the service relatively highly. Of the 678 respondents who answered a question on CD-ROM use, 384 (57 percent) stated that it was "Very Helpful," and 66 (10 percent), "Somewhat Helpful." As one librarian noted, "Most of the users who get onto ERIC on SilverPlatter are very satisfied (if not overwhelmed) with their results." However, 226 respondents (33 percent) said they had "Never Used" ERIC on CD-ROM. Librarians were the most frequent users, followed by college and university professors. School administrators were the least frequent users—53 percent stated they had "Never Used" ERIC on CD-ROM.

In the area of suggested improvements, one librarian requested "more timely updates to CD-ROM services." Another librarian thought it would be "great" if users saw an initial screen that explained that EJ materials come up first, followed by ED materials. Librarians also requested "more sophisticated searching" and "keyword searching" capabilities on CD-ROM.

Manual Search. ERIC users' ratings of the printed indexes *Resources in Education* (*RIE*) and *Current Index to Journals in Education* (*CIJE*) were generally favorable, with college and university professors being the most positive about the indexes' usefulness. A librarian noted, "*CIJE*, *RIE*, and the *Thesaurus* are essential to finding information for those interested in education topics. An unexpectedly helpful feature has been the listing of

contents of journals. That has helped us to verify citations from other sources." Respondents' rating of various aspects of *RIE* and *CIJE*, including coverage, selectivity, processing time, descriptors, and abstracts, are discussed in this section.

RIE. Of the 718 respondents who rated the usefulness of *RIE*, 408 (57 percent) rated the index as "Very Helpful," and 192 (27 percent) thought *RIE* was "Somewhat Helpful." Only 11 respondents, 7 of those librarians, felt *RIE* was "Not Helpful." Fifteen percent (107) of the respondents had never used *RIE*.

The subgroup of *RIE* users which gave the index the highest overall rating was college and university professors: 70 percent of this group rated *RIE* as "Very Useful," whereas the range of administrators, librarians, and teachers who rated it "Very Useful" was 54 to 57 percent.

Respondents rated coverage of *RIE* documents very favorably. Of the 453 respondents who had used *RIE*, 55 percent rated its coverage as "Excellent," and 44 percent rated it "Good." Differences in perceptions among subgroups (e.g., librarians and professors) were relatively small. The views of school administrators and classroom teachers on this topic are not reported due to the small number of individuals in these subgroups who responded to the question.

Two other criteria—selectivity and speed of processing *RIE* documents—were rated "Good" by the majority of respondents: 55 percent of respondents (246 out of 444) rated selectivity as "Good," and 57 percent (229 out of 402) rated speed of processing "Good." In addition, 40 percent rated selectivity as "Excellent" and 35 percent rated speed of processing "Excellent." Only 5 percent (23) of the respondents felt selectivity was "Poor," and the majority of these were professors. Eight percent, or 32 respondents, felt processing took too long; half of these were librarians. A librarian indicated that "sometimes quality of material in *RIE* is not good. Because there are no subdivisions under topics in the indexes, [searching is] sometimes time consuming."

RIE descriptors and abstracts were rated by approximately 460 respondents who had used *RIE*. Roughly half of these respondents considered both *RIE* descriptors and abstracts "Good." An additional 41 percent rated the descriptors "Excellent," and 48 percent rated the abstracts as "Excellent." Comparatively few respondents viewed these two criteria as problematic (4 percent and 2 percent, respectively). One librarian said, "I'm not sure *RIE* abstracts need to be as lengthy as they sometimes are—*CIJE* abstracts are about right."

CIJE. Sixty-one percent of the *CIJE* raters (445 out of 730) gave the printed index the top rating—"Very Helpful"; another 28 percent (202) rated *CIJE* as "Somewhat Helpful." One percent (8) found *CIJE* was "Not Helpful," and 10 percent (74) had never used it. As with *RIE*, college and university professors tended to view *CIJE* as more helpful than either school administrators or librarians, with 69 percent (164 out of 239) of them finding it "Very Helpful," as compared with 60 percent of school librarians (136 out of 225) and 55 percent of school administrators (62 out of 112) who rated it this way.

When queried further about *CIJE*, 59 percent of the respondents (265 out of 453) felt the coverage was "Excellent," librarians more so than university professors (63 percent and 51 percent, respectively). Another forty percent of respondents (183) rated comprehensiveness of coverage as "Good." Only 5 respondents (1 percent) thought *CIJE* coverage was inadequate. Because so few school administrators (48) and classroom teachers (23) said they had used *CIJE*, a determination of their views was not possible. One librarian indicated concern that the journal coverage was not exhaustive, offering "numerous examples of non-included citations." Another stated that "*Education Index* picks up a number of journals not included in ERIC—you should index more of these." Another noted that it "covers journals our library doesn't have and patrons don't understand," adding a parenthetical "not your problem."

Both the selectivity of *CIJE* documents and the clarity of their abstracts were rated highly by the approximately 440 respondents who answered questions about them. Forty-nine percent rated selectivity as "Excellent" and 48 percent as "Good." The comparable figures for clarity were 47 percent, "Excellent" and 50 percent, "Good."

The majority of the respondents who evaluated the usefulness of *CIJE* descriptors and the speed of processing time rated these criteria as "Good." Fifty-four percent (245 out of 452) rated descriptors and 57 percent (220 out of 389) rated processing time this way. "Excellent" ratings were somewhat less common for descriptors (given by 43 percent, or 193, of the respondents) and speed of processing (given by 37 percent, or 143, of the respondents). Small percentages of respondents viewed the usefulness of *CIJE* descriptors and the timeliness of *CIJE* document processing as "Poor"—3 percent (14) and 7 percent (26), respectively.

2.2.2 Opinions of ERIC Authors

ERIC authors tended, for the most part, to consist of college or university professors. Of the 250 author respondents, 53 percent were professors, 18 percent were librarians, 11

percent were school administrators, and the remaining 18 percent were divided among other user groups, including teachers, graduate students, and policymakers. The citation accuracy was rated "Excellent" by 82 percent (206) of the authors and "Good" by 16 percent (41). The clarity of document abstracts was rated "Excellent" by 74 percent (185) of the authors, and "Good" by 26 percent (64). Only 3 author respondents rated citation accuracy as "Poor," and 1 rated abstracting clarity as "Poor."

The processing speed of documents had moderate ratings by ERIC authors. Fewer than half of the 236 authors who responded to this question (42 percent, or 100 respondents) rated the amount of time to process the documents as "Excellent"; another 43 percent (102) perceived the processing time as "Good." Fourteen percent (34) of the authors rated processing time as "Poor." Thus, of the three criteria rated by ERIC authors, document processing time appears to be of greatest concern. Librarians who had authored an ERIC document tended to be most critical: 26 percent (11) of these respondents rated processing time as "Poor."

2.2.3 Search Tools

All three searching modes, online, CD-ROM, and manual, require the use of a controlled-vocabulary resource manual. The ERIC System has developed for this purpose the *Thesaurus of ERIC Descriptors*, which is updated and revised on a regular basis.

> ***Thesaurus of ERIC Descriptors.*** The 698 respondents who rated the *Thesaurus* found it largely favorable: 57 percent of them considered it "Very Helpful, and 27 percent, "Somewhat Helpful." Only two percent felt that the *Thesaurus* was not useful. However, a significant number (14 percent) stated they had never used the *Thesaurus of ERIC Descriptors*.
>
> Librarians tended to rate the *Thesaurus* higher than either school administrators or college and university professors. For example, 78 percent of librarians rated the *Thesaurus* as "Very Helpful," whereas 47 percent of school administrators and 51 percent of college and university professors did so. One librarian called the *Thesaurus*, "the best I've used (and I've used lots)—it's thorough and has great cross-references."

2.2.4 Usefulness of ERIC Information

The accessibility, value, and quality of database information to particular ERIC users were queried. ERIC users were asked about availability of the database, the nature of the information they obtain from it, and how the information was used.

> **Accessibility of the ERIC Database.** Overall, 90 percent of 787 respondents felt ERIC was available to them when they needed

information. Little variability in response pattern existed among the user groups. For example, when asked to respond "Yes" or "No" to whether ERIC was accessible, 90 percent of 256 librarians, 93 percent of 245 professors, and 86 percent of 120 school administrators indicated "Yes." Although classroom teachers, graduate students, and policymakers were less frequent ERIC users, the majority of these groups also felt ERIC was accessible (90 percent, 86 percent, and 87 percent, respectively). However, a number of librarians wrote open-ended responses regarding system cost, and some school administrators, policymakers, and librarians urged that ERIC work to make the system more affordable and available on school sites. A librarian suggested, for example, that ERIC "work with agencies to attract private/government funding for more CD-ROM access equipment on site and package with training sessions."

Types of Information Obtained from ERIC. More than half of the total respondents (619 out of 1,184 respondents) stated they had used the ERIC database to obtain journal article information. Other uses for database information, cited in descending order of frequency, were: unpublished documents (389 responses), conference papers (282 responses), literature reviews (263 responses), and curriculum material (125 responses). This same pattern was reflected in the various user groups' responses: librarians, school administrators, and college and university professors all were more likely to retrieve journal article information from the ERIC database than unpublished documents or conference papers. Yet responses to open-ended questions reflected these as a major benefit offered by the ERIC database.

Respondents were asked about the contents of the ERIC database and whether they felt any types of information were missing. Of the 508 who responded, 361 (71 percent) indicated that there was no information missing from the database. The remaining 29 percent (146) indicated several types of information they believe the database is lacking. These respondents would like ERIC to include books (31 percent), statistics (25 percent), newspaper articles (13 percent), and more journals (12 percent). The remaining 19 percent of the requests were for audio/visual materials, government reports, directories, speeches, and more coverage of current research, international education information, controversial issues, theses/dissertations, and conference proceedings.

How ERIC Information Is Used. Seventy-three percent of 720 respondents stated that ERIC database information was most useful to them for research activities. Nine percent used ERIC information primarily for administrative decisions, 7 percent used ERIC for curriculum development, and 4 percent used it for identifying instructional techniques.

The remaining 7 percent cited other uses. Most user groups turned to ERIC primarily for research papers, including 100 percent of the graduate students (37), 88 percent of college and university professors (204 out of 231), 80 percent of classroom teachers (39 out of 49) and 63 percent of librarians (140 out of 224).[2] School administrators were more diverse in their use of ERIC database information; these respondents used ERIC not only for research (cited as the most important use by 53 percent of the 111 administrators who responded to this question), but also for administrative decisions (26 percent), curriculum development (16 percent), and instructional techniques (4 percent). Classroom teachers and professors also used ERIC for curriculum development, but on a much smaller scale than research—14 percent of teachers and 4 percent of professors cited curriculum development as their principal use of ERIC information.

2.2.5 Document Retrieval/EDRS

Users who search the ERIC database for information to conduct research, develop curricula, or make instructional decisions must acquire full-text documents from the journals themselves or order copies of journal articles from vendors (e.g., UMI and ISI) In the case of unpublished documents indexed in *RIE*, the information is obtained either directly from a library ERIC microfiche collection or through the ERIC Document Reproduction Service (EDRS), which provides microfiche and "blow-backs" in the form of paper copies.

Survey respondents were asked general questions about document retrieval and specific questions about their use and evaluation of EDRS. ERIC users were concerned about the expediency of locating documents and the readability of the documents once received. On the issue of availability, one librarian noted that she "would prefer that the reports listed in ERIC which are not available from EDRS not be given the 6 digit number" because "patrons expect them in the fiche cabinets." A librarian found the cost of UMI "exorbitant." Another, noting that accessibility of some journal articles is limited, stated: "All journals indexed should be made available through UMI."

Many survey respondents were unfamiliar with EDRS. When asked to evaluate this ERIC service, 38 percent of the respondents (256 out of 674) stated they have never used EDRS. However, 40 percent (267) said the service was "Very Helpful," and 20 percent (134), "Somewhat Helpful." Only 2 percent (16) specified that EDRS was "Not Helpful."

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[2]In the case of librarians, it is likely that at least some of the respondents indicating ERIC use for research papers were referring to giving assistance to **library patrons** writing research papers. In addition, 15 percent (45) of the librarian respondents wrote in a response to the effect that ERIC helped them fulfill library patrons' requests.

School administrators and college and university professors tended to use EDRS services more than other user groups; for example, only 28 percent of school administrators (31 out of 109) and 24 percent of professors (54 out of 223) stated they had never requested documents from EDRS, compared to 55 percent of the librarians (114 out of 209).

ERIC users who had experience with document retrieval indicated a strong need for faster turnaround time for paper copy and microfiche received from EDRS. Seventy-six percent of the 189 university professor respondents, 66 percent of the 86 school administrators, and 59 percent of the 200 librarians wanted improved EDRS delivery speed. A professor stated, "The time between an order and shipment should be reduced."

The quality of printed documents received, on the other hand, did not appear to be a particular problem for ERIC users. Although improvement was considered necessary by 20 percent of the 583 respondents to this question, 61 percent of them were currently satisfied, and 19 percent had no opinion.

When asked to evaluate the quality of ERIC microfiche, the majority of the 776 respondents found the product "Very Helpful" (66 percent) or "Somewhat Helpful" (25 percent). A much smaller percentage of ERIC users found microfiche "Not Helpful" (1 percent) or had never used it (8 percent). Professors and school administrators rated microfiche slightly more useful than librarians, classroom teachers, and graduate students: approximately 93 percent of 113 of them rated it either "Very Helpful" or "Somewhat Helpful," as did 89 percent of 219 librarians, 88 percent of 48 classroom teachers, and 77 percent of 33 graduate students.

A number of respondents who wrote open-ended responses expressed concerns about microfiche quality. One researcher wrote, "Too many pages on microfiche are virtually blank. Too much space wasted. Too expensive." According to one librarian, "documents on fiche should be on positive film, not negative film."

2.2.6 ERIC Clearinghouses

The 16 ERIC Clearinghouses and four adjuncts provide services and products within a defined scope to a wide range of education information users. Each of the Clearinghouses covers a specific area of education, selecting materials for the database, developing publications, and responding to requests for information within its scope from educators and the public. Survey respondents were asked to indicate their familiarity with the Clearinghouses and to evaluate their products and services.

Although 65 percent of the respondents (441 out of 678) perceived ERIC Clearinghouses to be "Very Helpful" or "Somewhat Helpful," 34 percent (229) stated they had never used or were unfamiliar with ERIC Clearinghouse products or services. Only 1 percent of respondents (7) did not feel Clearinghouses were useful. Librarians, it appears, are

quite unfamiliar with ERIC Clearinghouses. For example, fifty-three percent (107 out of 203) stated they had never used ERIC Clearinghouses, in contrast to 18 percent of school administrators (20 out of 113) and 21 percent of college and university professors (47 out of 226).

The respondents were further asked to evaluate specific Clearinghouse products and services. Unfamiliarity with ERIC Clearinghouses was reflected by the low number of respondents (approximately 300) who answered questions on each product and service.

ERIC Digests, an information product targeted to school administrators and teachers, are produced on a regular basis by each Clearinghouse. Overall, these two-page syntheses of research were rated favorably by 79 percent of those who had used them (292 out of 372). A small number of users (6) rated them "Poor." Fifteen percent of respondents (56) reported they had never received *Digests*, while another 5 percent (18) received them but did not use them. However, it must be noted that 800 respondents failed to rate the quality of this and other Clearinghouse products and services.

Of the higher response user groups, college and university professors were the most familiar with *Digests*, librarians, the least. Twelve percent of professors (17 out of 141) versus 25 percent of the librarians (19 out of 75) had never used *Digests*. In general, *Digests* received the highest percentage of "Excellent" ratings from two subgroups: school administrators (46 percent) and professors (46 percent). The percentage of "Excellent" ratings from librarians was 27 percent. Thirty-five percent of librarians, 40 percent of school administrators, and 36 percent of professors rated the *Digests* "Good."

Monographs (e.g., *Trends and Issues*) also were rated positively, but again by comparatively few respondents. Sixty-nine percent of the respondents (231 out of 333) rated these publications as "Excellent" or "Good." It appears ERIC monographs are unknown or underused resources for some user groups. For example, 33 percent of the librarians (22 out of 66) indicated that they had never received an ERIC monograph, and another 14 percent (9) had received one or more but never used them. Of the remainder, 14 percent (9) rated them excellent, 38 percent (25) rated them "Good," and 1 librarian rated them "Poor." Among school administrators who responded to this question, 12 percent (8 out of 65) had never received an ERIC monograph and 11 percent (7) had received but never used one. Of the remaining school administrator respondents, 29 percent (19) rated them "Excellent" and 48 percent (31) rated them "Good." Of 134 college and university professors who responded to the question, 14 percent (19) had never received an ERIC monograph, 7 percent (9) had received but never used one, and 2 percent (3) had used a monograph but found it "Poor." Of the remaining professor respondents, 31 percent (42) found ERIC monographs "Excellent," and 46 percent (61) found them "Good."

Database searches conducted by ERIC Clearinghouses are perceived as a valued and needed service by ERIC users. Of the 329 respondents who had requested a

Clearinghouse search, 57 percent (187) rated the service as "Excellent," nearly 43 percent (139) rated it "Good," and less than 1 percent (3) rated it "Poor."

In comparison, ERIC users either do not need referral to other organizations working within a Clearinghouse's scope or are unaware of the availability of referral services. Sixty percent of the 287 respondents stated they had never used Clearinghouse referral services.

Overall, it appears many educators are generally unfamiliar with Clearinghouse products and services, but those who use them tend to find them helpful.

2.2.7 ACCESS ERIC

A comparatively new service within the ERIC System is ACCESS ERIC, a support component which develops ERIC systemwide products for distribution and operates an ongoing reference and referral service for the ERIC System. Of the respondents who evaluated ACCESS ERIC, 78 percent (441 out of 565) had never used the service. Of the 124 respondents who had used ACCESS ERIC, 61 percent (76) rated the service as "Very Helpful" and 37 percent (46) said it was "Somewhat Helpful." One librarian and one school administrator did not view ACCESS ERIC as helpful with their particular requests. There is no indication of user group preference for ACCESS ERIC services; group ratings were distributed evenly among the various respondents.

2.3 User Recommendations for System Improvement

To assess users' overall perception of the ERIC System, respondents were asked whether it met their expectations as an education information provider. The 687 respondents overwhelmingly stated "Yes" (96 percent). One librarian noted, "ERIC provides research that would never be available elsewhere." Another reported, "Its strength is its diversity and willingness to include materials used in local schools." "Students and faculty are very impressed with the breadth and depth of the ERIC database," said an education librarian. Another praised ERIC's inclusion of other types of documents: "The interdisciplinary nature of it is extremely helpful, as is its capturing of otherwise fugitive materials (reports, conference proceedings, etc.)." A graduate student called ERIC "absolutely critical for educational researchers, administrators, teachers, undergraduates in education, professors, etc.," adding, "Its computer reference is unmatched."
A librarian at a mid-sized academic library reported that ERIC was the "most used secondary information source," while another proclaimed, "ERIC is a marvelous service—my tax dollar has never been better invested!"

The few who said ERIC did not meet their expectations as an education information provider were equally distributed among the user groups, for example, librarians (5), school administrators (3), professors (4), classroom teachers (4).

About half of the respondents (600 out of 1,184) offered a wide range of recommendations regarding the ERIC system generally, or its various services and products in particular. Their recommendations may be grouped into the following categories of suggestions: technology expansion, database improvements, product development, and greater accessibility and training. Each category is further developed below.

2.3.1 Technology Expansion

Eighty-four percent of the respondents (539 out of 641) felt ERIC should add new technology to improve its system. Faster searching techniques were viewed as necessary by 73 percent of respondents (444 out of 612). Forty-two percent of respondents (229 out of 543) felt ERIC should develop alternatives to microfiche. One librarian noted succinctly, "People don't like microfiche; they like hard copy." Another said, "Patrons hate fiche, but librarians are resigned to it being around for some time." One librarian indicated that some patrons work around microfiche: "Patrons do not like using [it]—will sometimes limit searches to journal articles only for this reason." It must be noted, however, that 25 percent of microfiche users (138) were satisfied with the current product, and 32 percent (176) had no opinion. As one university professor noted, "Microfiche is relatively easy to locate and use—also, it is cheap."

2.3.2 Database Improvements

When queried, 80 percent of respondents (495 out of 621) indicated the ERIC database should be updated more frequently to improve the quality of the system. "The database is not as current as it claims to be," stated one librarian. Another wrote, "We have found that we cannot rely on ERIC to locate articles that were very recently published in journals." A professor wrote, "The time lag between availability of information documents and availability on system to users continues to stifle real time access."

Respondents also indicated that more comprehensive coverage of journals and full-text retrieval capabilities were desirable. Slightly fewer than half of the respondents (317 out of 639) marked on a ratings scale that surveying more journals for relevant articles was essential, while 34 percent (217) said it "Would Be Nice," 14 percent (86) did not think it necessary, and 3 percent (19) had no opinion. One librarian suggested that coverage be broadened to include "more teaching journals to entice practitioners as well as researchers."

Regarding full-text availability of journal articles, 53 percent of respondents (338 of 634) indicated that it was essential, and another 30 percent (191) selected "Would Be Nice." Fourteen percent (86) considered it unnecessary, and 3 percent (19) had no opinion. The majority of requests for full text came from librarians and university faculty. Indicating a preference for online or CD-ROM service with full text, one professor noted, "The 2-step system is very time consuming; expensive to make copies and one

goes blind reading the microfiche monitor!" A librarian requested that ERIC "make access to full-text quick and affordable." Another librarian stated a desire to receive "the full text from CD-ROM (say 20 years worth on a disc) rather than keep drawer after drawer of fiche."

A number of respondents indicated that database coverage should be improved in various areas. A librarian praised ERIC for "excellent coverage of educational materials (except art education)." A university professor wrote that "mathematics education documents are being neglected." One librarian asked that more "multicultural, ethnic minority, and 'alternative' periodicals and reports" be covered. A school administrator indicated a need for "better distinction between secondary school and college level articles in searches." One librarian called coverage of education beyond K-12, particularly graduate and professional education, "weak." A university professor suggested that databases be created for various academic levels, including elementary, junior high, high school, community college, and college. One librarian suggested "more documents on curriculum matters" to appeal to teachers; another noted that patrons "often ask for recent statistical information and also curriculum," adding, "These are tricky to find." A counselor suggested that the database include referrals for counseling services, drug treatment programs, etc.

Some respondents expressed concern about document selection criteria. "I feel the quality of the review process is weak," said one professor. A librarian reported, "ERIC is not widely respected by many scholars in related disciplines (i.e., psychology, related behavioral sciences) because of the lack of a referee process in the inclusion of ERIC documents." "The quality of the research included needs to be monitored more carefully," wrote one education researcher. Another said that ERIC needs to "get the articles 'rated'—especially in the category of quality of research design and methods of analysis." While praising abstracts of ERIC documents as "the only way to sift through masses of sources," a graduate student said, "I find ERIC documents disappointing in general." A university professor was concerned not about quality of individual documents but about quality control of records: "You don't always get everything because a descriptor is off by one letter."

While some respondents indicated the need for broadening coverage in specific areas, one librarian noted "much improvement in the process and the appropriateness of the materials over the last few years." Another was concerned that basic levels of service remain the same: "You're slipping. I understand budget cuts are the reason. Just keep doing what you're doing. What we need in the library are the cites and the microfiche."

2.3.3 Product Development

The questionnaire asked respondents to indicate which types of publications were important for their use. Librarians expressed the most interest in annotated bibliographies of "hot topics" in education, with 56 percent (164 out of 295) selecting

them. In-depth information and ready database searches on current education topics were selected by 37 percent of the librarians. Librarians as a group were less interested in education pamphlets for parents and in catalogs of current publications—18 percent and 26 percent selected those, respectively.[3]

Like librarians, college and university professors and researchers were most interested in annotated bibliographies of "hot topics"—68 percent (258 out of 377) of those respondents selected bibliographies from a list of possible publications. Ready database searches would be helpful for 54 percent (202) in this group, and almost half (177) wanted in-depth information on current education issues.

School administrators also expressed a strong preference for annotated bibliographies, with 57 percent (116 out of 202) selecting them. They were almost equally interested in ready database searches, with 53 percent (108) choosing this product. Forty-seven percent of the administrators (94) expressed interest in education pamphlets for parents of school-age children. A newsletter on new database technology was of the least interest, with only slightly more than a quarter (53) selecting it.

Three products were of equal interest for classroom teachers. Approximately half of the 163 teachers who responded chose all three of these products: education pamphlets for parents of school-age children, a catalog of current publications, and annotated bibliographies of "hot topics." As with school administrators, teachers were least interested in a newsletter on new database technology.

Parents, as expected, were most interested in education pamphlets directed toward them. Ten of the 15 parents who responded (67 percent) said this would be a good product for them. Eight (53 percent) were interested in annotated bibliographies and database searches on current topics in education.

Several respondents wrote open-ended responses to questions on ways ERIC could better meet information needs of parents and teachers. One librarian suggested that ERIC provide "regular 'summaries' of topics of interest to teachers and administrative staff." An education researcher, echoing this concern, said, "Provide capsulized summaries, in lay phraseology, of recent research findings as a resource available to parents." A school administrator said, "Put information into lay language, and get it into the popular press." A librarian suggested that bibliographies on timely topics be published in NEA's membership newsletters and added, "Clearinghouses should promote services and products more directly to schools through personnel contacts." One librarian suggested that the best way to reach teachers is through bibliographies in journals: "Multiple copies of ERIC bibliographies could be sent free through the little reader service cards that some magazines have or by distribution at professional

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[3]In this discussion, percentages will add up to more than 100 because respondents were allowed to check more than one answer.

conferences or through school district offices or libraries." One librarian suggested that ERIC Clearinghouses work to disseminate "more specific documents on parents in schools—empowerment issues—working on school boards, PAC organization, fundraising, schooling and decision-making processes, etc." A librarian requested that ACCESS ERIC continue to produce "easy-to-read brochures on everyday topics."

2.3.4 Greater Accessibility and Training

As the ERIC System continues to reach out to nontraditional users, accessibility and training issues become more apparent. Accessibility refers both to physical access to the database and the ability to get additional information or assistance as needed.

Users were asked which physical form/s of ERIC they would like to have at their fingertips. If they already subscribed to the database, they were asked which format/s they used. Of the 579 respondents, 37 percent said they have the database in one form or another, and 63 percent did not have access, but wanted it. Thirty-four percent of those who did not have the database said they would most like to have it on CD-ROM. Online was the next most preferred form, with 33 percent of respondents choosing it. About 10 percent said they would like hard copy, and another 10 percent said they would want both online and CD-ROM. The remaining 13 percent preferred various other combinations (e.g., hard copy, microfiche, and CD-ROM).

One librarian suggested that ERIC be available on CD-ROM for the Macintosh (as it is now available), because "schools in our area have more Macs than IBMs." A university professor suggested that ERIC "help schools get CD-ROM so that teachers can do immediate searches."

Some survey questions focused on how ERIC can improve its accessibility. More than 50 percent of the total respondents (667 out of 1,184) felt toll-free numbers would be useful. Toll-free access appears to be more important to school administrators than other user groups; 41 percent of them (36 out of 88) rated toll-free service as "Must Do" as compared to 32 percent of teachers (12 out of 37), 30 percent of university faculty/researchers (68 out of 226), and 24 percent of librarians (46 out of 189).

One librarian suggested that various ERIC components place actual ads (not announcements) in education journals to advertise their numbers and services. A university professor believed that ERIC should "routinely advertise database searches related to parents/schools in journals that parents read."

Some user groups showed a strong preference for training materials as a means of improving the ERIC System. Sixty-seven percent of the librarians who responded (133 out of 198) and 58 percent of college and university faculty (110 of 189) indicated the importance of providing information on how to use ERIC. Some examples of training materials suggested include search guides—both paper and video explanations of the

search processes; introductory pamphlets which explain what ERIC is and how it can help users; and on-site, hands-on training.

One librarian said, "Please promote ERIC and ACCESS ERIC more heavily to teachers, administrators, and parents. Develop an easy-to-use instructional package in English and other languages." A university professor suggested that ERIC "create a network of individuals who would be responsible for an informational display at state conferences." A librarian indicated that "a videotape on use"—with emphasis on use of thesaurus—would be helpful, because "people don't use it as they should." A school board member noted that it was important to "train the trainers" by giving libraries curriculum materials and handouts to be distributed to teachers, who would in turn, "get their students to use ERIC for learning and classroom assignments." A school administrator further stressed the importance of hands-on training: "Put someone on the road to do workshops. Learning materials alone are not enough."

Respondents identified preservice and inservice teachers as target users. A librarian noted that "ERIC serves researchers well. The service has not reached practitioners as well." One librarian suggested, "Target veteran teachers who attended college in the pre-technology days." A university professor urged ERIC to "increase easy availability of ERIC information and services in schools and school districts." A school board member suggested that in order to increase teachers' use of ERIC, the system should "work with school boards; resource specialist[s] within districts or the state librarian[s] within state education department[s]." A superintendent wrote, "It would be nice to have training sessions in public schools or local libraries about ERIC and how it can be used by everyone for a number of reasons." At least one librarian believed, however, that teachers "probably would not have time to master complicated search strategies."

Respondents from all user groups raised the issue of whether it would be useful to market ERIC to parents. A librarian noted, for example that "in my 13 years as an education librarian, no parent has asked me for a search." Another librarian noted, "It's not a parent thing for the average person. I think it's better to aim your energy at educators." A university professor noted, "Parents, unless well educated, are unlikely to use it." Another feared that targeting parents could diminish service to other user groups: "Such an approach may divert focus away from helping teachers/researchers, etc."

A professor noted that "parents who need most often don't have even basic strategies of accessing information (or using it) for empowerment." Other respondents suggested ways to reach parents. Librarians, professors, and school administrators suggested, for example, that ERIC work with parent-teacher organizations. A school board member remarked that a free or low-cost newsletter could be offered for parents through public libraries, pediatricians, or the PTA. A librarian reminded, "Parents often need how-you-do-it, not theoretical research" and suggested disseminating information through public libraries and day care centers.

2.4 Information Needs of ERIC Users and Nonusers

Users who are familiar with the ERIC System are in a good position to comment on the system's strengths and weaknesses in general and on ERIC's responsiveness in meeting their information needs. Data about the education information needs of nonusers can also be useful in helping ERIC focus its outreach efforts and identify possible expansion areas.

The 327 survey respondents who had never heard of or never used the ERIC System were asked why. Sixty-nine percent (226) said it was because they were not familiar with ERIC or knew nothing about it. Another 18 percent (59) responded that they were familiar with ERIC, but not sure how it could meet their education information needs. About six percent (19) said it was not available or convenient to them geographically, or they weren't sure if it was available. Four percent (13) said they did not currently need ERIC, while 3 percent (10) said they preferred to use other education information resources.

Understanding what users' and potential users' educational information needs are can help ERIC focus its efforts. Respondents were asked to rate six types of educational information on a scale of 1 to 6, with 1 being "Most Important" and 6 being "Least Important." The types were research projects/papers, quick information for problem solving, brief synopses of education research, practical ideas for classroom teaching, education resources information, and information for parents.

Using ratings of "1," "2," or "3" as a measure of a category's importance to a respondent, it is apparent that respondents who currently use ERIC most need two types of information: brief synopses of education research and research projects/papers. Seventy-five percent of respondents (488 out of 723) categorized brief synopses of research as a "1," "2," or "3"; 70 percent (502 out of 718) rated research projects/papers this way. Eighty-six percent of the respondents (525 out of 610) rated information for parents as a "4," "5," or "6," making this the least important category to current users of the system.

Of the nonusers, 73 percent (107 out of 147) identified practical ideas for classroom teaching as their most important education information need. Next in importance were information about education resources, identified by 60 percent of ERIC nonusers who responded (86 out of 145), quick information for problem solving, identified by 57 percent of nonusers (81 of 143), and brief synopses of education research, identified by 56 percent (80 out of 142). Of this same group, 73 percent (101 out of 138) chose research projects/papers and 55 percent (77 out of 139) chose information for parents as the least important to their needs.

Increasing awareness and use of ERIC is a challenge for the entire system. The user survey itself could be considered an education tool because respondents were asked to

indicate if they would like to receive additional information about ERIC. More than half of the respondents (642 out of 1,184) requested information be sent to them; unfortunately, only 70 percent (451) remembered to supply address information. College/university professors and researchers, school administrators, classroom teachers, and librarians were the largest groups surveyed, and they were the largest groups to request more information. By percentages, 100 percent of the counselors, 79 percent of the classroom teachers, 78 percent of the parents, 71 percent of the school administrators, and 60 percent of the college/university professors or researchers requested more information about ERIC.

Those who provided address information will receive a thank-you letter and a copy of *A Pocket Guide to ERIC*, along with the GTE brochure, the ACCESS ERIC brochure, the ACCESS ERIC rolodex card, and a set of Conclusion Brochures.

3. IMPLICATIONS OF SURVEY DATA

The ERIC User Questionnaire was designed as a tool for collecting information about users' and potential users' information needs, characteristics, assessment of products and services, and recommendations for system improvement. The data on user recommendations and information needs, in particular, can serve as useful input into any discussion on ERIC's future direction. In addition to the explicit recommendations and suggestions of survey respondents, other implications may be drawn from the survey data. These are grouped under four broad headings in this section: database improvements, product development, marketing/outreach, and training.

3.1 Database Improvements

- Given that 80 percent of respondents requested that the database be updated more frequently and approximately 50 percent indicated that broader coverage of journals was necessary, ERIC should continue to investigate the feasibility of these technical improvements.

- A majority of respondents showed great interest in faster searching and full-text availability of documents—issues that have both technological and financial ramifications. Two intangibles the survey could not capture was how much more, if anything, users would be willing to pay for enhanced services and whether they envisioned that full-text capabilities might add to the complexity of system use.

- More in anecdotes than in statistical data, users expressed concern about the overall quality of the records (e.g., spelling errors in descriptors that prevent document records from being retrieved), coverage of specific areas, and the process by which documents are included in the database. In addition to the ERIC System's ongoing efforts to observe quality control standards and to define and delimit ERIC's scope, it may be helpful to encourage users to alert ERIC to

errors in the records and to offer a mechanism for users to suggest expanded coverage (e.g., toll-free telephone line, electronic bulletin board, focus groups).

- System improvements, where indicated, should be made with an eye both to users' needs and their resources. As one librarian cautioned, "Be wary of choosing a 'technology' that is quickly superseded. Smaller libraries can't afford to invest in equipment that will be obsolete in a few years." Long-range product development and planning would help address these concerns.

3.2 Product Development

- Data regarding users' and nonusers' education information needs suggest that ERIC should continue to move toward "packaging" database information and text. Users cited great need for synopses of education research and research projects/papers. Nonusers' greatest need was for practical ideas for the classroom. To the extent that this information is already available from the Clearinghouses (e.g., *ERIC Digests*, bibliographies, TRIED series), the issue becomes one of marketing products to appropriate groups.

- Librarians and college and university professors expressed a strong interest in training materials as a means of improving the accessibility of ERIC. Since they are most likely to provide training for new users or nonusers, materials for teaching others are vital to them. The ERIC System should make training materials—both print and nonprint—available to these groups.

3.3 Marketing/Outreach

- Given librarians' critical role in disseminating information and their relatively low rate of Clearinghouse use in comparison with other user groups, librarians should be targeted to receive information about the operation and offerings of the various Clearinghouses.

- Because the number of teachers in the sample who were ERIC authors was low in comparison to other user groups, teachers should be encouraged to submit materials for database consideration. They would be an especially rich source of practitioner-related material.

- Librarians rated the *Thesaurus of ERIC Descriptors* as much more helpful than school administrators and university professors, probably because they are trained to use search tools. The *Thesaurus* should be marketed as part of the ERIC package—as a necessity rather than an extra. Subscribers should be encouraged to keep it next to their search stations and ERIC database users should receive training in its use.

- Since librarians play a critical role in directing users to information, and so many librarian respondents did not know about EDRS, EDRS should market its services directly to this group. Mailings, electronic messages, and video or hands-on training sessions in library schools are among the possible approaches this marketing could take.

- Many "traditional" users, including librarians, professors, and school administrators, expressed doubt about the ERIC System's use to parents. Since the survey included very few parents, it would be helpful to gather additional information from parents themselves regarding their education information needs and the format they consider most helpful. It is critical that the opinions of low-income, limited-English-proficient, illiterate, and minority parents be sought to ensure maximum responsiveness to parents.

3.4 Training

- Given the disparity between the percentages of university professors and the percentages of classroom teachers who had heard of ERIC—90 percent and 48 percent, respectively, efforts should be made to help education professors teach education majors about the ERIC System so that they can use this resource once they become classroom teachers. Printed materials, videos, and hands-on training are all possible means of "training the trainers."

- Recognizing that courses or inservice training and libraries were the two most significant sources for respondents' information on ERIC, the ERIC System should continue to target professors and librarians, while also attempting to address the low numbers of classroom teachers who have heard of ERIC through more focused outreach. Classroom teachers can be reached through preservice training, inservice training, or the provision of practical information packages based on classroom needs.

4. CONCLUSION

The ERIC User Questionnaire, though not scientific, yielded significant information about the information needs of system users and nonusers, as well as their perceptions of various ERIC products and services and suggestions for improvement. Additional assessments—both larger scale formal surveys and informal methods such as breakout groups at conferences—have the potential to build on these findings and increase the ERIC System's responsiveness to its multiple constituencies during its next 25 years of service.

APPENDIX A ERIC User Questionnaire Survey Instrument

Code #_____

OMB #1850-0658
Expiration Date: 5-31-92

ERIC User Questionnaire

1. What is your position?

[ ] Librarian
[ ] Researcher
[ ] Graduate student
[ ] Undergraduate student
[ ] College/Univ. professor
[ ] Classroom teacher
[ ] Other, please specify _____
[ ] Parent
[ ] Journalist
[ ] Counselor
[ ] School administrator

2. Have you ever heard of ERIC?

[ ] Yes [ ] No (Please answer questions 5-8 only)

3. Where did you first hear about ERIC? How long ago? _____

[ ] Journal/Newsletter
[ ] Conference
[ ] Courses or inservice training
[ ] Library
[ ] Colleague
[ ] Newspaper
[ ] Online education service (e.g. DIALOG)
[ ] Other, please specify _____

4. Have you ever used ERIC? [ ] Yes [ ] No (Please skip to question 5, and answer questions 5-8 only)

ERIC comprises the following services. Please rate all that you have used in terms of how the service generally met your needs.

	VERY HELPFUL	SOMEWHAT HELPFUL	NOT HELPFUL	NEVER USED
ERIC online database search service	[ ]	[ ]	[ ]	[ ]
ERIC CD-ROM search service	[ ]	[ ]	[ ]	[ ]
ERIC documents on microfiche	[ ]	[ ]	[ ]	[ ]
Current Index to Journals in Education (*CIJE*)	[ ]	[ ]	[ ]	[ ]
Resources in Education (*RIE*)	[ ]	[ ]	[ ]	[ ]
Thesaurus of ERIC Descriptors	[ ]	[ ]	[ ]	[ ]
ERIC Document Reproduction Service	[ ]	[ ]	[ ]	[ ]
ERIC Clearinghouses	[ ]	[ ]	[ ]	[ ]
ACCESS ERIC	[ ]	[ ]	[ ]	[ ]
Other, please specify _____	[ ]	[ ]	[ ]	[ ]

Comments: Please specify helpful features or problem areas, (e.g. quality of information, readability, range of information):_____

_____

_____

_____

Completion of information on this form is voluntary. This information shall not be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate the ERIC System.

Public reporting burden for this collection of information is estimated to average .33 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of this information, including suggestions for reducing this burden, to the U.S. Department of Education, Information Management and Compliance Division, Washington, D.C. 20202-4651; and to the Office of Management and Budget, Paperwork Reduction Project 1850-0658, Washington, D.C. 20503.

BEST COPY AVAILABLE

5. **If you don't use ERIC services and products, why not?**

[ ] I'm not familiar with ERIC
[ ] I'm familiar with ERIC, but I'm not sure of how it can meet my needs
[ ] ERIC is not available in my geographic area
[ ] I have encountered searching problems (please comment)
[ ] I prefer other education information resources (please comment)
[ ] It is not convenient (please comment)
[ ] Other, please specify _____

Comments: _____
_____
_____
_____

6. **What are your present education information needs? (Please rank the following in order of importance to you; 1 = most important, 6 = least important)**

[ ] Research project/paper
[ ] Quick information for problem solving
[ ] Brief synopses of education research
[ ] Practical ideas for classroom teaching
[ ] Education resources information
[ ] Information for parents
[ ] Other, please specify _____

7. **Which of the following education services/products would be useful? (Check all that apply)**

[ ] Toll-free number for education information
[ ] Training materials on "How To Use ERIC"
[ ] Short summaries of current research and classroom practices
[ ] In-depth information on current education issues
[ ] Annotated bibliographies of "hot topics" in education
[ ] Education pamphlets for parents of school-age children
[ ] Ready database searches on current education topics
[ ] Catalog of current publications
[ ] On-line full-text documents
[ ] Newsletter on new database technology
[ ] Other, please specify _____

8. **Would you like to receive a flyer describing the ERIC System?**

[ ] Yes (Please include your name and address with your completed survey)
[ ] No

Please continue only if you have used ERIC products.

9. **What information have you obtained most often from the ERIC database?**

[ ] Unpublished documents
[ ] Curriculum materials
[ ] Conference papers
[ ] Journal articles
[ ] Literature reviews
[ ] Other, please specify _____

10. Have you ever used RIE? [ ] Yes [ ] No **CIJE?** [ ] Yes [ ] No

If yes, please evaluate the following: RIE CIJE

	RIE			CIJE		
	Excellent	Good	Poor	Excellent	Good	Poor
Comprehensive coverage	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Selectivity of documents	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Usefulness of descriptors	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Clarity of abstracts	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Speed of processing	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

11. How do you feel ERIC can improve its services and products? Please rate each item, using the number scale below.

MUST DO		WOULD BE NICE		NOT NECESSARY	NO OPINION
1	2	3	4	5	6

__ Add new technology, e.g. full-text delivery on CD-ROM
__ Faster searching procedures
__ Update database more frequently
__ Survey more journals for relevant articles
__ Improve full-text availability of journal articles
__ Provide faster turnaround time for microfiche and hard copies
__ Develop alternatives to microfiche (please comment)
__ Provide products that can be used on your own PC
__ Improve quality of paper copies
__ Provide training and training materials to library staff . . . to professors . . .
__ Provide more toll-free numbers
__ Other, please specify _____

Comments: _____

_____

_____

_____

_____

12. For what activity has ERIC been the most useful to you? (Check only one)

[ ] Research paper
[ ] Curriculum development
[ ] Instructional techniques
[ ] Administrative decisions
[ ] Other, please specify _____

13. Is there information that is lacking in ERIC (e.g., books, newspaper articles, program descriptions, basic statistics)?

[ ] Yes, please specify _____ [ ] No

14. Is ERIC accessible to you when you need education information?

[ ] Yes [ ] No, why not?

Comments: _____

_____

_____

_____

15. If you could have ERIC in your local school, what would you prefer?

[ ] N/A; We already have ERIC in the form of _____
[ ] Hard copy (*Thesaurus*, *CIJE*, *RIE*)
[ ] Online
[ ] CD-ROM (Compact Disc/Read-Only Memory)

16. Have you ever used the ERIC Clearinghouses?

[ ] Yes
[ ] No

17. Please rate the Clearinghouse products or services you have received in terms of helpfulness in meeting your specific education information needs:

	EXCELLENT	GOOD	POOR	RECEIVED/ NEVER USED	NEVER RECEIVED
Two-page summary of research (Digest)	[ ]	[ ]	[ ]	[ ]	[ ]
Books (Monographs, Trends & Issues	[ ]	[ ]	[ ]	[ ]	[ ]
ERIC database searches	[ ]	[ ]	[ ]	[ ]	[ ]
Referrals (How useful was the referral?)	[ ]	[ ]	[ ]	[ ]	[ ]
Subject specific information	[ ]	[ ]	[ ]	[ ]	[ ]
Solicitation of documents	[ ]	[ ]	[ ]	[ ]	[ ]
Other, please specify _____	[ ]	[ ]	[ ]	[ ]	[ ]

18. Have you authored a document or journal article that is in the ERIC database? [ ] Yes [ ] No
If so, please evaluate the following:

	EXCELLENT	GOOD	POOR
Citation accuracy	[ ]	[ ]	[ ]
Abstracting clarity	[ ]	[ ]	[ ]
Processing speed	[ ]	[ ]	[ ]

Comments: _____
_____
_____

19. Can you suggest ways we can expand our ERIC services to classroom teachers and school administrators?

_____
_____
_____

20. Can you suggest ways ERIC services may be useful to parents?

_____
_____
_____

21. Does the ERIC System meet your expectations as an education information provider?

[ ] Yes
[ ] No

Please explain: _____
_____
_____

Thank you very much for your help. Please return the questionnaire in the enclosed envelope.

CALL 1-800-USE-ERIC if assistance is needed.

APPENDIX B Methodology

Instrument

A 21-question survey instrument was developed by Dr. Beverly Swanson, Director of ACCESS ERIC, with input and feedback from the ERIC Assessment Task Force (see Exhibit 1 for a list of members). Dr. Lawrence Rudner, Director of the ERIC Clearinghouse on Tests, Measurement, and Evaluation, Dr. Michael Eisenberg, Director of the ERIC Clearinghouse on Information Resources, and Craig Howley, Co-Director of the ERIC Clearinghouse on Rural Education and Small Schools, assessed the survey's clarity, brevity, and focus during question development. In addition, the ERIC Assessment Task Force met in January and March 1991 to review and comment on the questionnaire. Content and format suggestions were incorporated into the questionnaire. Two additional meetings were held with Dr. Rudner to plan statistical sampling and procedures. Reviews by Mary Foote, Aspen's survey projects manager, and Edith McArthur of OERI's National Center for Education Statistics led to further refinement of the survey instrument.

The Office of Management and Budget (OMB) approved the questionnaire on May 3, 1991, after a revision process which led to expansion or clarification of several items. See Appendix A for a copy of the approved survey instrument.

The 21 questions, 7 of which had more than one part, broke down as follows: 18 objective questions, 7 ratings scales, and 8 open-ended questions. Respondents who had never heard of ERIC were asked to complete only 6 of the questions; respondents who had heard of, but not used ERIC answered 8 questions. The questions addressed the following themes: respondent demographics (Questions 1–4), education information needs (Questions 5–8), ERIC use (Questions 4, 9, 12, 14, 16), user evaluation of ERIC services and products (Questions 4, 10, 11, 13, 14, 17, 18, 21), and potential areas for product and service expansion (Questions 15, 19, 20).

Throughout the preceding discussion, reference was made both to percentages and to numbers of respondents who answered in various ways. It should be noted that not all respondents chose to answer all questions, so the number of respondents that comprised user group percentages for each question varied (e.g., 50% of all librarians might have been 75 respondents for one question and 120 for another, depending on the total number of librarians who answered each question). In all cases, percentages were rounded to the nearest whole number.

Sample

The survey was designed to assess user perceptions of the ERIC System and to ascertain the education information needs of users and potential users. The survey sample of 3,600 comprised 600 individuals from each of the following groups: librarians, education researchers, university faculty, school administrators, elementary and secondary teachers, and policymakers (e.g., school board members and district and state education officials).

Exhibit 1: ERIC Assessment Task Force Members

Steve Balkcom
Education Program Specialist
OERI/ERIC

Ted Brandhorst
Director
ERIC Processing/Reference Facility

Judi Conrad
Associate Director
ERIC Clearinghouse on Higher Education

Dr. JoAnn Crandall
Director
Adjunct ERIC Clearinghouse on Literacy Education for Limited-English-Proficient Adults

Craig B. Howley
Co-Director
ERIC Clearinghouse on Rural Education and Small Schools

Dianne Rothenberg
Associate Director
ERIC Clearinghouse on Elementary and Early Childhood Education

Dr. Michael B. Eisenberg
Associate Director
ERIC Clearinghouse on Information Resources

Dr. Lawrence M. Rudner
Director
ERIC Clearinghouse on Tests, Measurement, and Evaluation

Dr. Beverly Swanson
Director
ACCESS ERIC

Dr. Charles W. Stansfield
Director
ERIC Clearinghouse on Languages and Linguistics

Dr. Carl B. Smith
Director
ERIC Clearinghouse on Reading and Communication Skills

Association members, who are by definition among the most knowledgeable and active individuals of their professions, were targeted to increase the likelihood of tapping ERIC users and potential users. Exhibit 2 identifies the subsets of survey recipients.

Drawing from professional associations obviously skewed the sample in favor of ERIC users. A true random sample of all librarians, education researchers, university faculty, school administrators, teachers, and policymakers would have yielded more respondents who never had heard of or used ERIC. These respondents obviously would not have been able to provide feedback about ERIC products and services, which was one of the main purposes of the survey. Because they may have had education information needs different from those of the survey respondents, however, it is important not to generalize survey findings to a larger group of ERIC nonusers.

Procedures

After obtaining mailing labels from the associations shown in Exhibit 2, ACCESS ERIC mailed surveys to the 3,600 individuals in the sample in May 1991. Included with the survey was a cover letter from Bob Stonehill, Director of ERIC, encouraging recipients to participate in the assessment, and a postage-paid, addressed envelope to encourage returns. Between May and September, a total of 1,184 surveys were returned. Figure 1 shows the user group breakdown of respondents. Survey data were coded, entered into a personal computer, and analyzed with the SPSS/PC+ statistical software package.

The overall return rate was 33 percent; however, one subset, librarians, had a much higher return rate—49 percent. Among school administrators, the return rate was 34 percent; among education researchers and professors (categories collapsed because many respondents identified themselves as both), it was 31 percent. Teachers had a response rate of 27 percent, while policymakers had the lowest—10 percent. Responses were also returned from a small number of parents, graduate students, school counselors, and others.

Nonrespondents are an inherent problem in any survey research. Possible reasons for non-response among survey recipients might be timing (surveys mailed near the end of the academic year), recipients' lack of knowledge about or experience with ERIC (why fill out a survey if one is unfamiliar with or not likely to use the product), or lack of support staff (information and education professionals may not have access to administrative staff to help them track correspondence). Given the relatively higher rates of response among traditional user groups, including librarians, researchers, and college professors, and time and cost constraints, follow-up mailings were not conducted for nonrespondents.

Limitations of the Survey

The fact that the research sample was skewed in favor of ERIC users and the response rate of some user groups was low point up some of the limitations of this survey. The survey was not a scientific study, nor are findings from it necessarily generalizable to the

population of ERIC users and nonusers at large. However, findings from user groups with larger response rates, particularly librarians, may provide some baseline data from which Central ERIC can draw for decisionmaking.

In short, the survey findings present a snapshot of ERIC system users and nonusers and their information needs. The survey may be used as a resource for improving the ERIC System and increasing its responsiveness to users.

Exhibit 2: Breakdown of Survey Recipients (n=3,600)

Target Respondents	Source of Mailing List	Sample Size
Librarians	American Association of School Librarians	200
	Association of College and Research Libraries	200
	American Library Association, Education, Behavioral, and Social Sciences Division	200
	Subtotal	**600**
Education Researchers	American Educational Research Association	600
University Faculty	National Education Association (professors)	300
	American Association of Colleges of Teacher Education (deans)	300
	Subtotal	**600**
School Administrators	National Association of Elementary School Principals	200
	National Association of Secondary School Principals	200
	American Association of School Administrators	200
	Subtotal	**600**
Teachers	National Education Association Elementary	300
	Secondary	300
	Subtotal	**600**
Policymakers	National School Board Association	150
	National Association of State Boards of Education	150
	National Conference of State Legislatures	150
	National Committee for Citizens in Education	150
	Subtotal	**600**
	TOTAL	**3,600**